

IN THE CLAIMS:

Please amend claims 1-7 as follows:

1. (Currently Amended) An inorganic intercalating ~~nan~~-catalyst for the copolymerization of carbon dioxide and epoxide to form poly(-alkylene carbonate) prepared by intercalating zinc dicarboxylate into an inorganic matrix, said inorganic matrix is prepared by delaminating inorganic mineral particles with having layered structure-.

2. (Currently Amended) The inorganic intercalating ~~nan~~-catalyst of claim 1 wherein the weight ratio of said zinc dicarboxylate to said inorganic matrix is from 1/1 to 1/20.

3. (Currently Amended) The inorganic intercalating ~~nan~~-catalyst of claim 1 wherein said intercalating ~~agent~~ zinc dicarboxylates ~~are~~ is selected from ~~the~~ a group consisting of zinc succinate, zinc glutarate, zinc adipate, zinc pimelate ~~and~~, zinc suberate, and ~~the mixtures~~ thereof.

4. (Currently Amended) The inorganic intercalated catalyst of claim 1 wherein said inorganic ~~matrices are selected from the group of inorganic mineral particles with having~~ layered structure are selected from a group consisting of montmorillonite, mica, vermiculite and kaoline.

5. (Currently Amended) A process for preparation of an inorganic intercalating ~~nan~~-catalyst for the copolymerization of carbon dioxide and epoxides to form poly(alkylene carbonate)s comprising:

~~delaminating the~~inorganic mineral particles having layered structure~~-layered matrix~~ with diluted acid, then calcining the product at 600-1,000 °C in a muffle furnace for 2~10 h prior to ~~gain~~intercalation an inorganic matrix;

dissolving a zinc dicarboxylate in ~~strong~~a strongly polar solvent ~~under~~with a pH value from 1.0 to 4.0, to form a reaction system, then introducing ~~calcinated~~calcined acidic matrix into the reaction system to perform intercalation for 30~120 minutes at ~~the~~a temperature from room temperature to 80 °C; and

removing the solvent to obtain a crude catalyst; and

refluxing the crude catalyst in a solvent with less polarity than said strong polar solvent at the temperature from 80 to 140°C for 24 hours; and

separating the inorganic intercalated catalyst by filtration.

~~improving the crystal of the intercalating nano-catalyst by refluxing in less polar solvent.~~

6. (Currently Amended) The process of claim 5 wherein said strong polar solvents ~~are~~is selected from ~~the~~a group consisting of methanol, glycol, ethylene glycol

Appl. No. 10/803,310
Amdt. dated November 8, 2006
Reply to Office Action of August 8, 2006

monobutyl ether, ethylene glycol monomethyl ether, N, N'-dimethyl formamide, sulfolane, imidazole, quinoline, water and N-cyclohexyl pyrrolidine; and adjusting pH value from 1.0 to 4.0 with diluted acid.

7. (Currently Amended) The process of claim 5 wherein said solvent with less polarity solvents areis selected from the group consisting of - benzene, toluene and xylene.